

## Nodes in the News

Welcome to the first column in our new series called "Nodes in the News." The creation of regional, thematic, and infrastructure NBII nodes has been a significant development this year (see Access, Winter 2001). These news-making nodes will be interconnected entry points that, taken together, will form the National Biological Information Infrastructure (NBII)—a Web-based system that provides access to data and information on the nation's biological resources. The nodes are being developed in coordination with various partners around the country. Each issue of Access will report on a specific node, which is another way of saying that for this publication, node news is good news. We trust our readers will agree.

## The Central Southwest/Gulf Coast Regional Node

To address the biodiversity aspects of sustainable development issues within the Central Southwest and Gulf Coast, the U.S. Geological Survey (USGS) Center for Biological Informatics and the Houston Advanced Research Center (HARC) have partnered to create the Central Southwest/Gulf Coast Regional Node. The node's data will encompass research into the applications of new spatial data analysis and visualization technologies. A complete description of the node can be found at [http://www.nbii.gov/about/partner/nodes/sw\\_gulf/sw\\_gulf.html](http://www.nbii.gov/about/partner/nodes/sw_gulf/sw_gulf.html).



The coyote is common in Texas and elsewhere in North America, (c) PhotoDisc.

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## GBIF to Provide Access to World's Species Information

March 1, 2001, marked the birth of an international science facility that will eventually provide worldwide access—via the Internet—to information about all the known (1.8 million) species of organisms that inhabit the Earth. On that date, the Global Biodiversity Information Facility (GBIF) exceeded the thresholds for its launching: to have at least 10 countries sign the GBIF Memorandum of Understanding (MOU) and to have at least \$2 million pledged toward its support. The United States is one of 14 countries that are charter voting



members of GBIF. Another 5 countries and intergovernmental organizations (including the Integrated Taxonomic Information System, ITIS, an NBII component) have signed on as associate participants.

Scientific information about biodiversity is concentrated in the scientific collections of the developed countries' natural history museums, herbaria, and microorganism repositories. GBIF will provide access to data on the 3 billion specimens located in those

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The coordinator of the node, Tom Hermann, is working with Dr. John Hill of HARC to launch the regional node. "I believe that the Texas node can develop important products, as well as leadership, in the NBII community in areas such as remote sensing technologies," says Hermann.

The state of Texas covers approximately 9 percent of the U.S.'s contiguous landmass and, thereby, represents many of the ecosystems in the region. Texas and the USGS have jointly developed a spatial statewide database (Texas Strategic Mapping Program-STRATMAP) that includes such digital data layers as soils, hydrology, transportation, topography, and aerial imagery. This advanced database will be complemented by NBII data to allow for the integrated study and management of natural resources and ecosystems. The STRATMAP program will also initiate a statewide geographic information node program to get these data to local users in the community.


The foundation of the regional node will be a standardized, accessible,



Other examples of Texas wildlife include (clockwise, starting top left): bluebonnet (photo courtesy of Big Bend National Park), roadrunner, and javelina. Pictures used with permission from DesertUSA <[www.desertusa.com](http://www.desertusa.com)>.

digital collection of useful biological information. Short and long (2-5 years) term projects will be established to develop biological databases and to apply these data (through the use of spatial analysis systems) for decision making associated with the management of natural resources. Planned projects presently include such aspects as: acquisition and assessment of biological data to improve the



environmental permit phase of major highway construction projects; quantitative inventory and modeling of the effects of the introduction of more trees within urban environments (Houston, TX); assessment of aquatic attributes (for instance, water quality and organisms) and buffer zones around the remaining natural bayou segments in an urban environment (Harris County, TX ... with an active Web site for community, educator, and student use); and integration of digital elevation and biological data for 3-D visualization of the desert ecosystems/habitats in Big Bend National Park. 



The white-tailed deer is a favorite game animal in Texas, (c) PhotoDisc.



Access, the newsletter of the National Biological Information Infrastructure, is published by the NBII National Program Office.

Ron Sepic, Editor  
Wendy Wicks, Associate Editor  
Cheryl Williams Levey, Production Specialist  
Donna Foulke, Web Specialist  
Vince Wilding, List Specialist

Contributors:  
Barbara Bauldock  
Gladys Cotter  
Mike Frame  
Andrea Grosse  
Thomas Hermann  
John Hill

Just send your comments, article ideas, and requests to be added to our mailing list (as well as address corrections) to:

Ron Sepic, Access Editor  
USGS-Biological Resources Division  
302 National Center  
Reston, VA 20192  
Phone: 703/648-4218  
Fax: 703/648-4224  
E-mail: [ron\\_seplic@usgs.gov](mailto:ron_seplic@usgs.gov)

Be sure to check out Access on the Web at <<http://www.nbii.gov/datainfo/pubs/news>>.

Please direct your general questions about the NBII, including partnership opportunities, to:

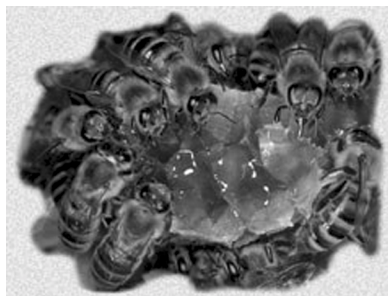
Program Manager  
NBII National Program Office  
302 National Center  
Reston, VA 20192  
Phone: 703/648-NBII (6244)  
Fax: 703/648-4224  
E-mail: [nbii@nbii.gov](mailto:nbii@nbii.gov)

Visit the NBII Home Page at <<http://www.nbii.gov>>.



**GBIF**  
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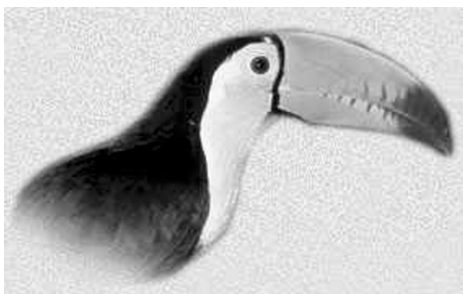
collections. Through the GBIF portal, users will employ cutting-edge search engines to find their way, interactively and in real time, through millions of biodiversity records in hundreds of databases located around the globe. GBIF will initially focus on species- and specimen-level data and will include links to molecular, genetic, and ecosystems data.



*Bee colony.*

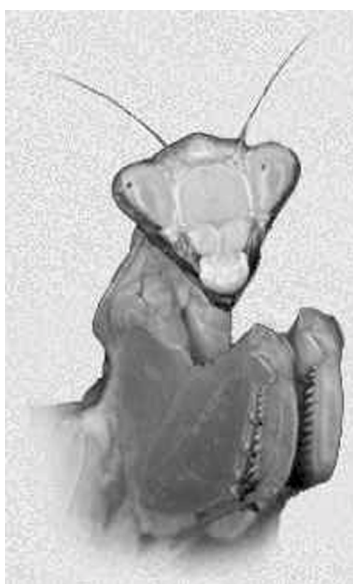
While the GBIF concept was originally developed as an Organization for Economic and Cooperative Development Megascience Forum project, GBIF as implemented is an independent entity supported by its member countries and organizations. At the first meeting of the Governing Board, held in Montreal, March 9-11, 2001, 55 delegates from 28 countries, economies, and intergovernmental organizations agreed on the final steps to make GBIF fully operational and accessible to the public within 12 months. The Governing Board elected Dr. Christoph Haeuser from Germany as its Chair and Dr. Kunio Iwatsuki from Japan as Vice-Chair.

“GBIF represents an unparalleled source of biodiversity information for



*Toucan.*

scientists, natural resource managers, policymakers, and the general public,” Dr. Haeuser stated. He added that a great percentage of specimens located in collections of developed countries were collected in other countries, notably developing countries. Dr. Iwatsuki said that GBIF “will aid in advancing education and scientific research ... and help serve economic and social interests, providing a basis from which the knowledge of the natural world can grow rapidly and be shared in a manner that avoids duplication of efforts and expenditure.”



*Praying mantis.*

### **The GBIF Concept**

In the GBIF model, databases will “affiliate” with GBIF, with providers retaining control over their own data. The protection of intellectual property rights and the equitable sharing of information and its benefits are cornerstone principles of the initiative. GBIF will be user driven and will employ best-practice technologies, standards, and procedures.

GBIF will work in close cooperation with established programs and organizations that compile, maintain, and use biological



*Zebra.*

information resources. For example, the GBIF concept has received continuous and sustained support from the Convention on Biological Diversity, and GBIF’s scientific data on biodiversity will be a valuable adjunct to the Clearing-House Mechanism. Complementary national and regional initiatives, including the NBII, the Inter-American Biodiversity Information Network, and the North American Biodiversity Information Network, will work synergistically with GBIF.

At the core of the GBIF architecture will be the Catalog of Life, which will include the names of all known organisms. Biodiversity literature resources, biological specimen data, and “SpeciesBank”—a database of species information—will be accessible through the names catalog. The names catalog will also link to resources such as GenBank and other databases containing sequence, climate, ecological, and other geospatial data for which other agencies are responsible.

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*Tiger.*

### Ebbe Nielsen Remembered

Delegates to the first Governing Board meeting were saddened to hear of the death of Dr. Ebbe Nielsen of Australia on March 7, 2001. Dr. Nielsen, a visionary in the field of biological informatics, had worked tirelessly toward the establishment of GBIF. He was visiting friends in California, en route to the Governing Board meeting, when he suffered a heart attack and passed away in his sleep. Delegates dedicated the first Governing Board meeting to the memory of Dr. Nielsen and created the Ebbe S. Nielsen Prize to be awarded twice a year to outstanding young scientists.

*The Ebbe S. Nielsen Prize  
will be awarded twice a  
year to outstanding  
young scientists.*

### What's Next for GBIF

In the months ahead, the members of the GBIF Governing Board will select an Executive Secretary, as well as the country to host the Secretariat. Australia, Denmark, the Netherlands, and Spain have already submitted bids to host the Secretariat. The second meeting of the Governing Board will take place in Bonn, Germany, on June 16-17.

Membership is open to any country, economy, or organization that agrees to sign the MOU, establish a node, and share scientific biodiversity data with GBIF. Voting members make a financial contribution based on a country's gross domestic product. Associate members, who pay no dues, have a voice but no vote on the Governing Board.

Further information about GBIF can be found at <http://www.gbif.org/> and <http://www.gbif.net/>.



## Upcoming Events of NBII Interest

Sixth Search Engine Meeting. Boston, MA.	April 9-10
Technical Experts Group on Forests. Montreal, Canada.	April 9-12
Networking 2001: Conference on Federal Policy Affecting Networking and Information Technology for Higher Education. Washington, DC.	April 10-12
Crossing Boundaries in Park Management: The GWS Biennial Conference. Denver, CO.	April 16-20
57 <sup>th</sup> Annual Northeast Fish & Wildlife Conference. Saratoga Springs, FL.	April 22-25
International Workshop on Mountain Ecosystems: "A Future Vision." Cusco, Peru.	April 23-27
Extranets 2001. Santa Clara, CA.	April 30-May 2
Second International Symposium on Information Technology in Biodiversity Research. St. Petersburg, Russian Federation.	May 13-17
InfoToday 2001—featuring National Online 2001, KnowledgeNets 2001, and E-Libraries 2001. New York, NY.	May 15-17
ContentWorld 2001. Burlingame, CA.	May 16-18
International Conference on Biodiversity. New York, NY.	May 22-25
American Society of Indexers 33 <sup>rd</sup> Annual Conference. Boston, MA.	May 31-June 4
Society for Scholarly Publishing 23 <sup>rd</sup> Annual Meeting. San Francisco, CA.	June 6-8
Third International Conference on Ecosystems & Sustainable Development. Alicante, Spain.	June 6-8
American Library Association Annual Conference. San Francisco, CA.	June 14-20
Second Symposium on Marine Conservation Biology. San Francisco, CA.	June 21-26
American Society of Ichthyologists & Herpetologists Annual Meeting. University Park, PA.	July 5-10

## Inside IABIN

### IABIN Seeks GBIF Associate Membership


The Inter-American Biodiversity Information Network (IABIN) has indicated its interest in becoming an associate member of the Global Biodiversity Information Facility (GBIF) (see related story, page 1). The goals of GBIF align well with those of IABIN, and the implementation of IABIN will fulfill the biodiversity information-sharing requirements for GBIF membership. By early March, seven IABIN Focal Points and a number of additional IABIN participants had indicated their concurrence with IABIN moving forward within GBIF. When a majority of IABIN Focal Points signal their concurrence, the United States, as Chair of the IABIN Council, will sign the GBIF Memorandum of Understanding, and IABIN will seat a delegation at the next meeting of the GBIF Governing Board, scheduled for Bonn, Germany, in June 2001.

### Improving IABIN Communications

IABIN is developing a directory of institutions, organizations, and individuals in Latin America and the Caribbean that actively participate in invasive species programs. Of particular interest are organizations or institutions that are the points of coordination for, or leaders in, the research and management of invasive species in their country. Opportunities may exist in the future for collaborations among Latin American and Caribbean organizations and the United States to share experiences in dealing with invasive species, and this directory would be a first step in identifying potential partners. Please send any pertinent information to <iabinteam@usgs.gov>.

The USGS Center for Biological Informatics has set up **iabinfriends**, a new listserv for friends and partners of IABIN to encourage the exchange of ideas and facilitate consensus-building. About once a month, the IABIN Planning Team will also provide an IABIN news update via the listserv. If you would like to subscribe, send mail from your e-mail account to <Majordomo@monarch.cr.usgs.gov> with the command "subscribe iabinfriends" (without the quotes) in the body of your e-mail message.

The U.S. IABIN Web site <<http://www.iabin-us.org>> is being reorganized and improved to provide better access to the results of IABIN projects and to promote communication. Through the improved Web site, users will be able to send feedback about the site or subscribe to the **iabinfriends** listserv with just the click of a button. Additional links to the sites of partners and other relevant organizations will be added. You are invited to suggest improvements and new links to be added to the list at <<http://www.iabin-us.org/biodiversity/index.htm>>.

IABIN is an initiative of the Summit of the Americas to promote exchange of biodiversity information throughout the Americas to support decision-making and education. The international IABIN Web site can be found at <<http://www.iabin.org>>. 


## CHM Connection

### CHM New Phase to Emphasize Cooperation

At a meeting of the Informal Advisory Committee to the Clearing-House Mechanism (CHM), held in Montreal recently, Hamdallah Zedan, Executive Secretary of the Convention on Biological Diversity (CBD), stated that the CHM would begin its next phase with an emphasis on promoting technical and scientific cooperation. The recently concluded pilot phase of CHM focused on building an infrastructure for information sharing: implementing a CHM Web site, creating awareness publications including a newsletter and flyers, and developing a toolkit to assist member States in establishing their CHM focal point Web sites.

Marcos Silva, the new Head of the CHM, stressed that developing new mechanisms for technical and scientific cooperation did not exclude or negate the need for ongoing information exchange. Rather, information exchange would now focus on implementing the decisions of the parties to the CBD. This second phase will concentrate on promoting cooperation in specific areas of effort that may include the Global Taxonomy Initiative, the Global Invasive Species Program, the marine and coastal program, and the ecosystems approach.

Members welcomed the announcement from Dr. Zedan that he wanted to broaden participation in the Informal Advisory Committee (IAC). In addition to core members of the IAC, the CHM will call upon experts in the various areas to participate and assist in the activities to be undertaken. The IAC recommended that the CHM emphasize capacity building, particularly education and training, and that a core group be constituted to examine metadata and common formats, which are key to increasing interoperability. The IAC also recommended that the CHM examine the need to produce information in different languages and use non-Web, non-electronic tools to reach regions with inequitable access to new technologies to ensure that information available on the CHM reaches the scientific community.

The next IAC meeting will be held in November 2001. Additional information on the CHM and the activities of the CBD can be found on the CHM's newly redesigned Web site, <<http://www.biodiv.org/chm>>. The CHM is an international initiative of the CBD (1992). The CHM is designed to facilitate technical and scientific cooperation among countries and to provide global access to and exchange of information on biological diversity. 

# NBII Metadata Training

Metadata training workshops prepare participants to create metadata.

Typical two-day workshops include discussion of:

- The Federal Geographic Data Committee's Content Standard for Geospatial Metadata and the Biological Data Profile.
- Metadata creation tools.
- FGDC and NBII Clearinghouses.
- Metadata quality issues.
- Metadata submission.

Shorter workshops may exclude computer-based training. For current information regarding locations, dates, and metadata training content and training workshops, go to <http://www.nbii.gov/datainfo/metadata/training/index.html>, or contact:

Sharon S. Shin  
NBII Metadata Training Coordinator  
USGS Center for Biological Informatics  
P.O. Box 25406, MS 302  
Denver, CO 80225  
phone: 303/202-4230  
fax: 303/202-4219  
e-mail: [sharon\\_shin@usgs.gov](mailto:sharon_shin@usgs.gov)



*At the annual meeting of the American Association for the Advancement of Science, held recently in San Francisco, Susan Fayad of the NBII exhibit team met briefly with "Albert Einstein." The NBII exhibit featured a quotation attributed to Einstein: "We still do not know one thousandth of one percent of what nature has revealed to us."*



NBII National Program Office  
U.S. Geological Survey, 302 National Center  
Reston, VA 20192

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